

Deposition from air Seattle Iron & Metals

Problem:

Facilities neighboring Seattle Iron & Metals have reported deposition of pollutants on their property that they believe are released into the air by Seattle Iron & Metals. This potential pollution release and deposition is not covered by any of the permits that Seattle Iron & Metals has, but is believed to be affecting the ability of properties in the vicinity of Seattle Iron & Metals including the City of Seattle to comply with their NPDES responsibilities. Additionally, EPA's Superfund program is concerned with the potential for these releases to be carried into the adjacent Duwamish Waterway, and recontaminate the sediments.

Data need:

Currently the City of Seattle, the Washington State Department of Ecology, the Puget Sound Air Agency, EPA's Superfund program, and neighboring facilities are all frustrated with the apparent inability to solve this problem. Collecting data to determine whether this is an actual source / pathway for pollution will provide a basis to determine whether it can and should be addressed in Seattle Iron & Metals' permits, either air or storm water.

Approach:

Collect deposition samples at locations at the perimeter of Seattle Iron & Metals and in increasing intervals away from the facility. To the extent possible, analyze the collected material for the range of analytes covered by the Washington State Industrial General Stormwater Permit, Seattle Iron & Metals' individual NPDES permit, and Washington State sediment management standards.

Optional:

Collect deposition samples in concentric rings around other, similar facilities to determine whether these releases are inherent to this sector, or whether different practices already in use in the industry might reduce the load from Seattle Iron & Metals.

Sampling design questions:

1. type of collection device – want to capture all typical deposition, not vapor phase
2. rain – only sample in dry weather? This UK study collects and analyzes rain as part of the air deposition [http://www.uk-pollutantdeposition.ceh.ac.uk/heavy_metals/]
3. for what period of time? 8 hours? 8 days?